The underlined numbers are in Bentham's set.

1.

Numbers corresponding to labels on the plants. Commencing with the first plants gathered in California. valley of the San Joaquin &c.

No 1. River Merced; Dec. 17. 1845. River bottom, sandy soil.

" 2. " " " "

" 3. erodium cicut: " " " " "

4. Stanislaus river, Dec. 16th. " river bottom; a species of white oak, going certainly to six feet diameter, think I have seen it eleven.

Camp in the Great Sierra; Dec. 24–25. (on a small fork of the Tulare lake fork.

No 5. The long-leaved pine, resembling oak in its general figure – forks sometimes near the ground, making two trunks. At camp, having made its appearance in the course of this short day's journey. (from the Lake fork in the valley to a stream among ridges or foot hills of the sierra – elevation of camp 24–25 = 2200 feet above the sea) The tree appears to be very resinous; the bark of a red color, and the furrows not deep.

" (6). Dec. 21. 1845. Moss from an ash; on a dry fork of the San Joaquin river – rolling hills.

" (7) Dec. 16. 1845. Stanislaus river; a large oak, occupying the bottom in open groves.

" 8 2. lobata From the oaks occupying bottoms of the Lake fork, Dec. 22. 1845. There are here varieties of oaks, or rather different species.

" 9 En route, among foot hills of the sierra between the Auxúmnè and forks of the respective San Joaquin

" (10) Same locality as No 9.

" (11) Same " as " 9.

" 12. From a tree in the meadow at camp of 20–21 Dec. '45. foot hills of the sierra. This tree grew in the water of a little creek.

" 13 Low bottoms of the river Merced; Dec. 17. 1845.

. 14 2. lobata oaks Bottoms of the Cós – um – nè river; Dec 14. 1845.

Note. No 14 appears repeated in the journal.

TORREY CORRESPONDENCE HERBARIUM COLUMBIA UNIVERSITY.

page 1.

No. 14. – Dec. 14. 1845. Among the rugged spurs and hollows of the Sierra Nevada. The shrub with the chocolate coloured bark; that of which Dr. Torrey was so anxious to have the flower and fruit. It is common to the sierra from near the summit to termination of the foot hills of the mountains.

" 15. Q. agrifol. a species of holly or live oak; very frequent along the streams of the valley (San Joaquin). Dec: 17th, near the Stanislaus river.

" 16. From a tree 25 feet high; at camp of Dec: 24–25, in foot hills of Sierra Nevada – elevation 2200 feet above the sea,

" 17. From a small branch among the hills of the lake fork where it enters the valley (of San Joaquin). (a pretty, red flower, abundant in the Rocky Mtns.) Dec. 23d 1845.

" 18. Bottoms of lake fork, a little above its entrance into the valley. Dec. 23d 1845

" 19 Helianth – same locale and date as 18.

D" 20 Arctostaphylos Chocolate cold. shrub – Dec. 23. 1845.

" 21. Lake fork, in the valley, Dec. 22d 1845. Tree 25 feet high & 18 inches diameter. Grows in a large bunch.

" 22. One of the live oaks; camp of Dec: 24–25. 1845.

" 23. From an oak three feet diameter. On a dry fork near the Lake fork; Dec. 23. 1845.

" 24. River's brink, San Joaquin river. Dec. 21. 1845. Myrica Californica? near foot of hills at edge of valley.

" 24 (repeated) same locality & date as above. There were many in mass'd in the water.

" 25. Camp of 24–25 Dec. A very abundant shrub of the Great Sierra; here 12 – 20 feet high.

" 26. "Bois noir". Flowers early in Missouri – march. Cercis occident. The large tree has been destroyed by fire, and this Decem: specimen is from the shoots around the root. Camp of 24–25, D

TORREY CORRESPONDENCE
HERBARIUM
COLUMBIA UNIVERSITY

page 2.

No. 27. — Amidst large rocks — taken for seeds.

Camp of Dec. 26 – 27. 1845. at head of a main branch of the Tulare Lake fork, elevation 6570 feet above the sea. ~~near~~ near central ridge of the Sierra nevada.

no 28. on the ridge; thickly covering hill side at camp of 26th — 27th Dec.

" 29. On a high granite (white) ridge, (9400 feet above the sea) a ~~live~~ or evergreen oak, 7—8 feet high. Dec. 26. 1845.

" 30 Same locale & date as 29. a very large pine — one of the large-coned (p. Lambertiana?)

" 31. Same place and date as 29. a lofty pine — 2½ feet diameter (a handsome tree)

" 32 same kind of tree, in same situation.

" 33 This tree a little thicker than the other. Decr. 26; a little east of locality of 29, and on bottom land of a fork.

" 34 The same as 33.

35 The same place & date as 29. Dec. 26. (The same number (35) goes with the fruit.

Quercus densiflora Hook & Arn

Camp of Dec. 29 – 30. 1845; at junction of two head streams of the Tulare lake fork, among the rocky eminences of the Sierra Nevada. Elevation = 8200 feet above sea.

No 36. summit of the sierra Nevada, on a rocky spur immediately below the naked peaks of the central ridge — elevation = 10450 feet above the sea — Dec: 28. (white pine?)

CORRESPONDENCE HERBARIUM COLUMBIA UNIVERSITY.

" 37 Same tree &c, as No: 36.

" 38 nearly same locality as 36, but less exposed.

" 39 same tree as 38.

" 40 }
& } Runs along the rocks; abundant on the flat rocks; Dec. 29. 1845
" 41 }

" 42 A common pine of these mountains — large, tall trees.

page 3.

No 43. On a rocky point overlooking cañon of the river; camp. Dec: 29 – 30. 1845

" 44 Same locality as 43 – I noticed but the one plant.

" 45 & 46 } One of the largest forest trees here – bark yellow and cracked, but not deeply furrowed – as are the pines. a *sapin*? Dec. 27. 1845.

" 47. The cones of No: 36. – Dec. 28. 1845

" 48. In a valley of the lower ridges – an abundant tree – (live oak?)

Quercus agrifol. B.?

" 49 Fruit of No: 48.

Camp on road from San José to Santa Cruz; summit parts of Coast Mountain (between Francisco & Monterey bays)

~~Cam~~ February 23. 1846.

No: 100 The red wood. This specimen from the lower branches of the tree – at this camp.

" 101. Same as 100.

" 102 The red wood. This specimen from the very summit of the tree, where this tree appears to bear its flowers. This camp.

" 103. Same as 102.

" 104. The red wood. This specimen from about midway ~~Nes~~ Taxodium Sempervirens the tree. at this camp. I have not yet measured the altitude of any of these trees, but we travelled about over the mountain between this and the preceding camp (say 4 miles), searching for the largest trees. 9 – 10 feet was a frequent diameter, none going beyond eleven except in a single instance, in which the tree measured 14 feet. The bark is very thick; in some of the " large trees being upwards of 16 inches, very deeply furrowed. The trees very straight. The thickness of bark here may be in some measure peculiar to the locality.

~~a~~ (Note a few days afterward, I measured a tree (in the forest belonging to Mr. Graham, ~~at~~ near Santa Cruz and in the low grounds near the coast) which was 275 feet high, and 15 feet diameter 3 feet above the ground. There were other taller trees in the forest, but I saw none so thick. In the forests of the Sierra Nevada, lat 40° – 41°, I afterwards saw finer trees, of great height, carrying their bulk better, with clean, solid stems and thinner and smoother bark. Among these seven feet was a common diameter,

page 4.

1846

6.

105. In open ground at camp — Feb. 23. — sandy soil, among small round rocks.

106 ? Gilia? same locality & situation

107 On trail near camp of 21 — 23 Feb. cuesta de los gatos (wild cat ridge) — rather wet ground on side of a small creek, in thick timber.

108 Same as 107.

109 Same as 107

110 Open prairie — near mountain summit; Feb. 22. 1846

111 Open prairie among foot hills of the mountain; Feby 21.

112 Same situation as 111.

113 Camp of 20 — 21 Feb. — its first appearance. I saw it frequently yesterday on hill sides on the mountain — both on open spots and among the red woods.

114. Camp of Feb. 20 — 21, valley at foot of the cuesta de ~~las~~ gatos. A bush 2 — 5 feet high. Saw it also ~~near~~ on the sandy shore near Monterey in flower about the last of Jany. (flower yellow)

115 Same plant [locality?] as 114 & same locality. The contrast of white organs with blue petals (and sometimes petals of other colors) makes this a pretty flower.

116 Solanum umbellif.? Same camp as 114 — a blue-flowering shrub, here 2 — 3 feet high.

117 Hill side among the red woods. Feby 22d. same plant as 113.

118 The Madrono. A very handsome tree. On the upper part of the mountain I measured some nearly four feet in diameter and about sixty feet high. It is found in the mountains. I ~~never~~ saw none on the plain or among the foot hills. When dry the wood is said to be red and sometimes of several colors. It is very heavy, hard and

TORREY COLLEGE HERBARIUM COLUMBIA UNIVERSITY.

close grained, and I am told is susceptible of a beautiful polish and is valuable for furniture.

119. Same locality.

120. Arctostaphylos Camp at the Laguna, (valley of San José, opening on San Francisco Bay). Hills in the rear, bordering the valley. The mansanita.

121 Same as 120

122 Same as 120

123 Oreodaphne Same camp at the Laguna. In the creek near the water. a very sweet-scented laurel (?). I have ~~marked~~ (and tried it on others) that ~~the~~ smelling the fragrant leaves of this tree produces quickly pain & unpleasant sensations in the head. ~~Fruit is fully formed by the middle of September~~. I saw trees near San Luis Obispo (lat 35° 20') having the fruit fully formed in the middle of September.

124. Hills in rear of the Laguna; Feb. 18.

~~125~~. Camp at western foot of Coast mountain, near Santa Cruz. Feb 24 & 25.

125 Turritis? (1845?) cf. T. spathul. Nutt. — Rnolt. (Primulifolia) ovate? At this camp on wet bottom; open prairie.

126. a shrub 7 – 8 feet high; broken, brushy, hills; afternoon of Feb. 24. on road from summit of mountain to Santa Cruz. Soil a hard sand and clay. Flower white.

127 Oreodaphne The sweet scented laurel; camp of Feb 23 – 24; summit of coast mountain.

128. Camps of Feb. 21 – 23 & 23 – 24, and abundant on this mountain. The hickory oak. Until I had found the acorns, I had believed this tree to be a hickory, which it very much resembles in its general shape, and in the whitish color & smoothness of its bark and in its leaf. It is hard and close grained, an evergreen. I saw it on the north hill sides, (which it seems to prefer) nearly one hundred feet high and nearly four feet in diameter.

1846.

Adaccia hemly

129 Summit of ridge between camps of Feb. 21 & 23 & 23 & 24 (cuesta de los gatos)

130 Cynoglosse-grande Camp of Feb. 23 – 24.

131 } Rolling hills at western foot of coast mountain –
132 } Feb 21.

133 A shrub frequent along ridge leading from summit of the cuesta de los gatos towards Santa Cruz. very brushy and broken hills; soil a hard sandy clay, Feb. 24.

134. Camp at Santa Cruz; wet soil of springs – open – a yellow flower. Feb. 26.

135. Camp at Santa Cruz. In a grove of red (?) oaks and in a thicket. This was growing on a small oak. This is the plant which two years ago was pointed out to me as the "yerba buena". It is not so. In January (1846), on the lake fork of the San Joaquin, we gathered the fruit of last year. Flowers white, and difficult to preserve.

136. Camp at Santa Cruz, Feb. 26. In shape of the leaf and in ~~the~~ having hairs on on the branches this ~~fo~~ differs from the specimens observed in the mountains of the Sierra.

137 At the Laguna, valley of San José.

138 San Joaquin river; Feb. 7. 1846.

139 Penced. At the Laguna.

140 Along the hills near mission of San José.
? Ranunculus Californicus 2nd var. of Whipple Rep.
difectus or
Feb. 10. 1846

D 141 - Gilia In oak grove at camp near Santa Cruz. The bush about four feet high.

142. The same.

143. The same

144. From an oak which is abundant on the uplands bordering the Mokelumne river, Joaquin valley – an evergreen. Dec. 16. 1845

HERBARIUM COLUMBIA UNIVERSITY. DENCE

1846

144'. Acorns of 144. Dec. 16. 1845.

D 145. Same as 141.

146. same tree and same locality as 128. The hickory oak.

147. Camp at western foot of coast mountain (cuesta de los gatos) Feb. 25. 1846. In rich soil, among small oaks and near red woods. Its height was only 6 or 7 feet. appears to be marked by some peculiar differences.

148. From the same bush.

149. Thermopsis macrophylla a yellow-flowering legume, common in the Rocky Mtns on the waters of the Uintah and Grand rivers. Here it is more luxuriant; being about three feet or more in height, with larger leaves. Camp at Santa Cruz.

150 Solanum Californicum ? a blue- or purple-flowering shrub, having the organs yellow.

151 Near camp on summit of coast mountain, Feb. 23^d in deep woods; likes a rich, moist soil; and is one of the few flowers in bloom that are somewhat frequent.

152. The same as 149.

153. Thermopsis The same as 149,

154 Cardamine angulata? The same as 151.

155. The same plant and same locality as No. 115. (? Im

Saxifraga peltata = 1740 Hartweg Calif. Camp on the rio del Pajaro (Bird river). ~~Fe~~ March 2.

156. On road, March 2, near a small laguna; between Lonic. arctopoides the mountain and the bay of Monterey,

157 Nicolletia Camp at Santa Cruz. Feb 28. 1846. (note. the label of this number has wrong date). In oak woods, brushy; ~~158~~. and among rocks,

158. Same locality as above, but near the stream.

1846.

No. 159. Uva marōn (wild grape); a tree or large shrub; some of them measured fifteen feet in height. The Spaniards tell me that the fruit is very good — ~~perhaps this is~~. A beautiful shrub at this time. March 1st, in wood of a little stream near northern shore of Monterey bay. Very abundant in places in the sierra near this camp.

Ribes glutinosum Dougl.

D 160. At camp on the Pajaro (Bird) river (tributary to north shore of Monterey bay, and about 7 miles from the Bay) in the bottoms of this river, among timber, and in gravelly soil. March 2d

Calandrinia Menziesii

161 Eschscholtzia Californica; rich soil of flat plain bordering the Pajaro river; March 2d

162. Near road between camps of 1st & 2d March. A small, delicate flower, of sky blue color, and one of the earliest to bloom in this country. I found it very abundant on the American fork 2 yrs ago.

163. Camp on right bank of the ~~Tawalumne~~ Auxumne river (San Joaquin valley); March 14.

163. On a sunny hill slope to the river bottom, open; many and luxuriant flowers here. This one abundant.

164. River bottom, open. This plant grows here in an unbroken field, in full bloom. Among it erodium cicutarium, in bloom, occupies the place of the grass.

165 Erodium cicutarium. This is in rich soil, and as in all such cases, much larger than the plant generally.

166. A very small white flower. this camp

167. Hosackia maritima " yellow " " "

168. A new (not seen before); this camp,

169. Very abundant over all this country.

(For 170 see farther on) Burrielia gracilis DC.

171 Frequent throughout this valley.

Phacelia (Eutoca) Douglasii.

Ranunc. dentatus ? [illegible] but more pubescent

172. a new (not before seen) yellow. this camp.

173 Brodiaea congesta an onion. this camp.

174 a plume shaped ~~p~~ flower. Made its first appearance yesterday. this camp.

175 Salvia A legume, white flower; its first appearance.

176 Layia platyglossa var. Very abundant over all this valley; a common plant to this country and now in full bloom.

D 177 Layia elegans Very abundant over all this valley; a whitish flower; there is also a yellow color, more abundant.

178. Occasional; a beautiful purple plant, ~~leaves~~ petals delicately fringed. This camp.

179 ~~abundant in this~~ Frequent in this valley.

180 Frequent in this valley — rare here.

186 River bottom under the oaks. This camp. (note. The ~~plant~~ labels do not always follow regularly, as a considerable number were usually made at once, and the first which came to hand affixed to the plant.)

Camp on the river Towalumné ~~river~~; March 15th.

181. Cercis occidentalis In the timber along the river here, and in the bottom. Ten feet high; saw but one bunch or bush.

170. An oak on the uplands bordering the river here. The oaks in the bottom; which appear to be of a different kind, are not yet in flower.

185. Claytonia ~~[illegible]~~ perfoliata with unusually large pods? On bottom under the oaks. It appears to be now going to seed.

(note. Erodium cicutarium is here 16 inches long in places and on all the uplands hereabouts makes the sward of the country; with it is interspersed other grasses, principally a bunch grass. No 178 was frequent today; no. 173 frequent; Nos. 164, 176 & 177 as usual, abundant.

1846.

11.

203. At camp of March 18–19. Abundant.

Tropidocarpum new. "seed perfect" Camp on Butte river (of the Sacramento) latitude 39° 39′ March 28.

204. Many along the road to day. (prairie between Feather
Delphin. menziesii river and Butte creek.

205. Delphinium Along road yesterday, 27.th (upland bordering Feather riv.

M? Sisyrinchium

210. The sycamore of the country with strings of balls. On
D. Plat. Lost creek (between Feather and Butte rivers.

209. } Is this the Camas? Saw it in but one place where
= 213. } it was abundant, on the open plain.
Fritillaria

215. A fine large oak 2½ feet diameter; a new species.

[213] Amblyrion v. Fritillaria Oak uplands of Feather river, 27. March.

214. Quercus densiflora Same locality as 215. An evergreen.

212. One of the large deciduous oaks common
to the bottoms of these streams. Same locality as 215

206. Another one of the large deciduous oaks. Same
locality as 215.

211. 26 March. Abundant in thickets along the
Ceanothus ~~[illegible]~~ integerrimus [illegible]s and in full bloom.

No. 208. Near Sacramento river, lat. 40° In the sand
along the creek.

207. Same locality. Naked gravel. This is a new
Linum ~~Californicum~~ Breweri plant, the colour being white and the leaf
different.

Left bank of Sacramento river, about lat. 40°.40′. Camp 8–9 April
Plants.

216. April 8. large gravelly prairie. This is the
beautiful contrasted flower (blue and white) of the
Santa Cruz Mts.

217. Nemophila linifolia Fisch. & Mey Bank of the Sacramento; April 8.

218. " " " gravelly and sandy,

219. " " " "

220 Cotton with uncommonly large leaf. Crossing of the
Sacramento. April 8. Wood on low upland prairie
bordering river bottom..

1846.

221. A blue lupinus 2-3 feet high growing near the Tollon.

222. ? ~~Peucedanum~~ Ferula macrocarpa Hook & Arn.? not Peuced. macrocar. Nutt.
= 1751 Hartweg Calif. Same locality as 218.

223. Among the brush on bank (sometimes bed) of Cottonwood creek - April 8. A shrub resembling willow.

224. En route - April 8. le long de la rivière, dans les rochers arose l'eau.

225. Barbarea vulgaris or arcuata A new flower - en route dans le bois in a thicket of a white flowering shrub.

226. Tollen with green fruit. April 7.

227. An evergreen oak, 2 feet diameter April 7.

228 Quercus Another oak - deciduous with small oval shaped leaves but slightly lobed.

229. Camp at Neils creek.

230. 25 March, road from Tanners to Keizars.

231. Bear creek, at Keizars.

232. High prairie, Bear river. Collinsia grandiflora

233 Escholt. n. sp.? immensely large-flowering " " "

234. Feather river uplands.

235 Clematis lasianthus Nutt " "

236. Clover? Il y en avait une quantité (There was much of it) April 7. in open oak woods.

237. Peucedanum utriculatum A common plant that bears are fond of.

238. A kind of wild pea - bottom of the Sacramento.

239 Rubus / [illegible] ursinus Coral creek near Hyde's ford of the Sacramento.

240. Aristolochia Same locality. The pitcher plant. A vine frequent on the bottoms of these creeks.

241. Gilia capitata A pretty little blue flower - fragrant - abundant on the prairies - April 5.

242. Lupinus grandis Same localities - abundant on the prairies.

243. D. Populus } Cottonwood in flower. Deer creek at Lassens.
244. } The same in fruit, and same locality.

245. D Leptosiphon A new flower - under the shelter of shrubs in woodland & along a small creek. April 7.

222 c. Orthocarpus

TO[illegible] HER[illegible] COLUMBIA UNIVERSITY.

1846

13.

246. Sur la fourche sec. (Camp creek.) April 7.
a beautiful scarlet legume.

247. Oak, deciduous – En route April 7.
Quercus ?

248. A new yellow flowering plant, open prairie.
Monorhynchus heterophyllus
n. sp.
Camp at Lassen's farm Sac^to valley. latitude 40° April 12.

No. 249. Creek bottom among the oaks, occasionally shaded. A blue or purple legume; common in this country. Near it See. Achillea millefolium;
Delphin menziesii probab

250; 251; a round leaved clover, not in bloom; pea vine &c.

250 is generally found most flourishing under the oaks. These oaks here are No. (253). They are large fine looking trees – very gnarled.
Nemophila parvifl
253

252 The wild buckwheat.
Claytonia parviflora

254. Same locality as 249, and common in the bottoms.
Phacel. tanacetif

255. A yellow flower, the blossoms involuted like a worm. Common to all this valley.
Amsinckia

256. A pea vine very abundant in this bottom. It seems of fine large growth, several feet in height.

257. Another prairie – in moister ground, nearer the river. This appears to be a different species, and I think ~~and I think~~ the leaves do not attain a larger size than in the specimens

TORREY CORRESPONDENCE
HERBARIUM
COLUMBIA UNIVERSITY

258. Same locality as above, partially exposed to Sun. This is the first time I remember to have seen the plant in flower.
Comandra

259. On the bottom without the oaks, a good, dark soil. I have noticed this plant as occasional throughout the valley above this.
Sanicula bipinnatifida

260. A very frequent plant throughout the valley above the American fork.
Dodecatheon [illegible]

261. & 262. These two lupines are growing side by side, but they appear to be different species.
Lupinus ornatus

(261 & 262 continued) They are very common in the valley, and so far as I have remarked, are always found near streams. They are here in handsome tufts, about 3 feet high and in full bloom; open prairie — soil here, hard and a large gravel. beginning now to form the pods.

263. The Californian poppy. It is here of smaller growth than usual. It is everywhere forming the seed pods.

HERBARIUM UNIVERSITY

Drawn by Mr. Kerne.

No 270 — an oak Q. Hindsii (See his sketch in Herb. Form

271. — "

Orthocarpus 272 — flower

273 — a very small fleshy plant with yellow flower. Sedum ~~spathulifolium~~ Sparsiflorum?

274 — yellow handsome flower.

275 — a chamomile like plant.

300, 301, & 302 numbered in the Drawings but not yet in the plants).

276. purple & blue.

No. 264. Camp, Lassen's farm. Ap. 16. Plants gathered on the open prairie; among oaks, but on open ground in river bottom — a good dark soil. Geranium cicutarium.

265. The bee sting plant. a remarkably shaped flower; higher prairie; yellowish soil — gravelly. Orthocarpus

266 A common clover. the leaves heart shaped. just now beginning to flower. Same locality as 265. Trifolium (albopurpureum)

267. A small fleshy leaved legume — flower yellow — occasionally seen from this in the valley above to Cow Creek. Same locality as 265. Hosackia supinata

269. Achyrachaena mollis.

268. A small new plant. Transparent, white petals, curved backward and downwards.
First seen at Neils' place, locality of 265.

269. ~~Actynomeris~~ (~~mollis~~ New plant. Actynocephalus mollis Same locality as 265.

277. " " " "

278. A very common plant over all these vallies, growing in fields on open ground. The soil here is very hard. It is yellow-small. Seven petals enclosing a number of minute flowers (yellow) These latter are star shaped, having five petals or lobes(?) and contain the organs of the plant. Same locality as 265.
Burrielia (Baeria) chrysostoma
Dichaeta Fremonti

279. A new yellow flowering plant. The extremity of petals having 5 upright teeth. (Same local. as 265)
Macrorhynchus leberopterygius Nutt.

280. An occasional plant in this valley (Same local. as 265.)

281. A very small and very common plant.
The flower rose colored and very small.

282. A new helianthus? The first we have seen.
Balsamorhiza macrocephala Nutt.

283. New plant - same locality as 265.

284, Alsine Douglasii Fenzl (Ar. trichoidea Nutt.?) " "

D 285. A new plant, small pink flowers grouped. Locality a little higher than 265, soil hard, dark, and covered with scattered stones - a small pond near. This plant is much covered with hairs. The plant very small.
Limnanthes (n. sp. Benth.)
by (n 85) Pogogyne
D 285(a) Lab.

286. nearer the pond. soil hard, but black, & richer. a frequent plant this - here whitening in abundance the ground near the lake - a pretty delicate flower. It is now in flower and seed at once.
Limnanthes

287. Same locality as 286. Abundant here and common in the Sacramento valley.
~~Ditto~~ Dichaeta fremontii

288. Same circumstances exactly as 287.

289. Same locality as 288 - an abundant plant - flower yellow, and same character as 278, but a different species.
~~Dichaeta~~ ~~Fremontii~~ Torr.
Dichaeta Fremonti

TORREY CORRESPONDENCE HERBARIUM COLUMBIA UNIVERSITY

TORREY CORRESPONDENCE HERBARIUM COLUMBIA UNIVERSITY

The fruit & leaves have been sent
to Princeton.
J.C. Frémont.

300. Quercus agrifolia – large leaves
Between Cow Creek & the Sacramento –

290 } [illegible]
291 }
292 } Corresponding to Mr. Kern's drawings.
293 } Same plant as 265.
orthocarpus

April 17. Lassen's farm. Plants gathered in a walk on the open prairie south of this creek.

294. Solanum Californicum
N Naked and very loose sand on border of
Amarantus?? bu? a water bed. Flower is purple with
& specta Gr in pl. Fendl. yellow organs. First in descending the Lake fork and afterwards in Santa Cruz into more frequently.

295. A beautiful plant. Rare – have seen it but twice. Grassy, flowery and dry coulée; surface covered with gravel and stones: Dark sandy soil.

{ 296 Lupinus Same locality as 295 and abundant.
{ 297. " " " " . Tricolor rare.

298. Rhus diversiloba Cedra. Coulée side as above.
299 Chenactis heterocarpha Torr & Gr. sp. nov. Frequent. Same locality as 294.
303 orthocarpus " "
Dr 304 Platystigma lineare abundant "
305 Eschscholtzia hypecoides Growing at foot of a conglomerate rock – on sunny side. In flower and in seed.
306 Thysanocarpus elegans Same locality; frequent.
307 Same locality as 294. A frequent plant.
308. Trifol. 3-dentatum Clover. very stony ground immediately in bed of coulée.
309. Same locality as 294 & frequent in & near creek beds.
310. Same locale as 294. A very abundant plant throughout the Joaquin and Sacramento vallies.
311. Orthocarpus Same locale as 294. The color of this is white.
~~312. Same locale as 294.~~

TORREY CORRESPONDENCE HERBARIUM COLUMBIA UNIVERSITY.

1846

Nemophila liniflora Fisch. & Mey

312. The delicate blue. abundant in the Joaquin & Sacramento vallies. On side of coulée (south) soil richer and not stony.

313. Same locality as 312. Occurs solitary and rare.

314. Plectritis macrocera A new plant. Same locale as 312.

315. Same coulée (or dry rivulet bed) but on south side and entirely and always shaded by a conglomerate rock overhanging it; and in a depression where water endures long tho' none now. This and the following are new plants.
mimulus

316. Plectritis macrocera Same localety as 315.

317. " " " – first noticed in '44 on Du Chesne's fork – very small white flower.

318. Open prairie, sandy soil – hard. a species of onion? white flowers. (318 & 319 transposed?)
Layia (Calliachyris) Fremontii

319. a common and abundant plant in the Joaquin & Sacramento vallies. Same locality as 318.
Hesperoscordum lacteum

324. (taken for seed.) a tree on Lassen's creek. seeds numbered 324. 1846.) April 18. 1846. Lassen's farm

321. (Drawn by Mr. Kern.) This appears to be the snofs plant of the Arkansas &c. but here the color is yellow & the snofs ? with the addition of a blood red spot on the inner side of each of the 3 petals. This specimen brought in by Tison from Near Lassen's farm.
Calochortus luteus

322. An occasional plant – just now beginning to flower. North side of a dry coulée – dark soil, the surface gravelly and strong.

323. Same locality, common.

325. A small white, flowering plant growing very thickly on the stony bed of the creek very common in such localities
Gilia

1876

18.

326. Senecio eurycephalus T&Gr. mss. A new helianthus? In the same coulée, nearer the main river, soil brown, sandy.

327. Castilleja. On the open prairie; brown soil, a little sandy. This is the beautiful red of the Arkansas divide. Frequent here.

328. Good rich soil; on bottom of Lassen's creek. a cabbage?

April 21. Lassen's farm.

329. A species of nettle of which the Sacramento indians make all their fishing nets, deer nets, ropes etc.

On Antelope creek, trib. to Sacramento ~~near~~ above Lassens.

330. April 24. Camp at Meadow farm 330 creek bottom, at camp.

331 " " " sheltered by timber. This is the first appearance of this plant. 330, 331, both drawn by Mr. Kern.

TORREY CORRESPONDENCE HERBARIUM COLUMBIA UNIVERSITY

Camp 25–26 April.

D 332 (25 April) In crossing a very rocky ridge. The beautiful moss plant, but a still different species from any hitherto seen & very beautiful.

D 333. Bahia lanata April 25. Frequent along the road.

334. Bed of a dry creek, (parmi les propres roches) April 25. This is a plant of which hitherto we have never been able to find the flower.

335. Clematis lasiantha A vine running over broussaille – white flower – first appearance – on Whitequail (Milk) creek. Abundant.

336. L'herbe à Dinde. River bottom among the oaks Camp 24–25 april.

337. Rocky ground – gravel – open. 25 april.

338. Echeveria A new plant - singular appearance - very fleshy - new - On rocky ground.

339. Timber of the creek at camp. A new flower
"in Dielytra formosa" ~~[illegible]~~ (colour pink; heart shaped at base, curving downwards, - dedecatheon dentatum.)
no -

Camp 25 - 26.

341. An oak from the uplands

342 } - Orthocarpus
343 } Drawn by Mr. Kern. -

Plants at camp of 27-28 April. On a small head water of Cow Creek; Sierra of the Sacramento.

344. Hard to preserve. Blue with white organs

345. Ilex? The first place where I find it in flower.
D Berberis aquifol

(346. The rice root plant - scarlet bell flower. new.

347. A small yellow flower.
Sanicula - sp. nov.?

(348 Fritillaria

349 (-Umbellif. - Gray don't know.)
Drawn by Mr. Kern

350
351 } Calochortus - small fl.

At Camp of April 27-28, 1846. Plants.
On small stream in head of Lower valley and tributary to the Sacramento.

D 352. = 339 Yuba river. April 25.

353. Along road. " 27. A moss plant, new - the
Calochortus inside of petals entirely covered with
nitidus? moss like appearance of hairs - entirely new
= 350. This specimen yellow.

354. Dans l'eau même; in the water of a little
"Hinnelia grandiflora" ~~or Platystemon~~ Gr mistake of no.! Hosackia creek. April 26. A yellow flowering water plant.

355 Noon halt - april 26. A handsome water plant
Saxifraga peltata growing in the river where the water was six inches deep and current swift.

356. A new plant; resembling hollyoke - on open hill at camp of 26-27 April.

TORREY [illegible] HERBARIUM COLUMBIA UNIVERSITY.

Rec^d. March 5th

+(I put a cross to words I don't comprehend) BH

[Collection of 1846]

357 — a blue flowering shrub — 2-5 feet high — in +"talle" (~~tulle?~~) — growing abundantly on a +mtn crossed to day — (April 27.)

Ceanothus divaricatus

358 — A red plume plant, its first appearance, I saw it to day in no other situation but at the foot of pines. Occasional.

Pedicularis densiflora

359 — A purple flowering shrub, growing very low in close spreading +talles. Its first appearance — on open mountain rocky.

Ceanothus prostratus var.

360 — same plant as 353 but of a light purple colour. same localities.

361 — noon halt 26-27. ~~Hor~~ Collinsia parviflora

362 — April 27. Hosackia bicolor

363 — noon halt April 26-27.

Sax. peltata

364 — Live oak

365 — another evergreen oak (Drawn by Kerne)

366 — the same as 358.

Camp on the upper Sacramento above the

Plants. Great Cañon, April 29-30.

367 — Camp 28-29.

368 — mtn. of the Cañon range: April 28.

[illegible]

369 – same locality as 368 – tolerably abundant a new shrub four feet high or taller.

370 – a cherry? a small shrub 2 & 3 feet high occasional in these mountains and first seen here.
Prunus subcordata Benth.

371 scattered about tolerably frequent in the pine woods. 28 & 29 April.
Hydrophyllum capitatum

372 another new shrub – say 2 - 3 feet high – near the ~~gap~~ in summit of Sierra Nevada 28 April – a blood red (dark) flower.

373 open prairie Ap 28. Viola pedunculata

374 a tree, say ten feet high – on a creek. no leaves yet.

375 a foot or two high – abundant – on the higher parts of the mountains.

376 Tolerably abundant: generally in open rocky ground April 28.
Peucedanum

377 The star moss flower of the Columbia (subterranean fall). In beautiful bouquets today.
Phlox

378 near the lodge; camp 29 – 30 April.
Camassia

379 Or[illegible]ril 30. prairie – edge pine woods.
Villarsia pumila

380 Leucocrinum Open ground – a little rocky – May 1st its first appearance.

380(a) Calycadenia truncata?

381 scarlet flower. In open pine wood, on open hills and on prairie. April 30 – its first appearance.

382 Hill side of Klamath lake, May 5 —
a conifera - (Will Dr. Torrey please remember
I am no botanist if I decipher
latin names wrong. J.B.F.)

383 Peucedanum — A Kainote? a yampa? The root of this
to be put in paper. It is large. May 5.
frequent for some time back.

384 — (Draba?) May 4. its first appearance, generally in banks;
among hills parasite(?) absinthe.

385 — river bank at camp of 3-4 May - a new
artemisia?

386 — differing from the above and apparently from
all the artemisias I have seen, in the form
and color of the leaf & a large brush on plain
of river bottom among other artemisias.

387 } Juniperus a cedar at camp 4-5 May

388 a Cedar at ford of Klamath outlet

389 a cedar at camp 5-6 May Klamath lake.

390 Geum triflorum Just beginning to flower - abundant here
in the lodges; low lake bottom camp 5-6.

391 a small blue flowering legume - abundant
here.

392 another legume

393 Betula pumila a common plant in the valley.

394 abundant. low stony ground.

395 — very abundant in the valley Calliprora lutea

396 an onion? Allium acuminatum

397 – same locality near Lassens.
Fritillaria - Kamt.? in fruit.
398 – " "
Melanthi. in fruit "

Latitude 39° 12'; in Sacramento valley,
Camp at the Buttes ^ May 30 1846.
Labels to plants for seeds.
no 399 a handsomely colored thistle. occasionally
400 plant bearing a small white flower. abundant
Eritrichium
401 Eschscholtzia Californica
402 The blue worm plant. abundant in valley.
403. The large shrubby ~~plant~~ Lupine. common here.
404. il y en a beaucoup

Plants gathered in this month; labelled at this Camp May 30 1846)
405. May 22d. abundant in valley passes.
406. Found only at one place – there abundant – On entering the oaks of the valley from the Piney region of the Brushy Pass in the Sierra Nevada May 22.
407. Noon halt 22 May. This changes its color which is originally a violet blue grows in tulles.

Recd. march 20th (2d. Spent of plants). 1846.

408. Likes rocky or gravelly ground of the hills – May 22. a blue colored +mass flower.

409 – A shrubby tree – pp. 15 high – this was the only one seen. brought me by Kit.

410 – A shrub 6-10 ft. high – straight growth – Nozah river. Cotters creek of the Sacramento. Spike of flowers a lilac color and very fragrant.

Ceanothus integerrimus

411 – at the meadow coral in fork of the upper Sacramento – grows among the pines – occasional –

Fritillaria

412 – Rocky East shore of Tlamath Lake. abundant in thickets – 10 feet high – a prunier?

413 – Little tributaries of upper Sacramento in piney forest.

Lithospermum?

414 – near locality of 411. rare.

415 – Battle ford – on the cañon of Sacto river la ~~grappes~~ grosses tailles, pres de la terre.

Phlox ?Sabini

416 – same locality as 411.

Lathyrus

417 – Thlaspi cochleariforme? Same locality as 413 – a rase de l'eau.

418 – noon halt, on a tributary of the Sacra-mento – day that we encamped at locale of 411. tolerably frequent there – stony bottom.

Camassia Lindl

419 – The beautiful moss-flower – color yellow (naples yellow) with an iris-like spot on each petal – a spot like those on peacock's feather – same localities as 408 which is another species.

Cyclobothra & Calochortus

420— On the upper Sacramento waters. May 20.
Peraphyllum. On a large fork— abundant. the mountain pink. Dried it has exactly the smell of rubarb (Rheum)

421— a handsome yellow flower and greatly abundant amidst fields of clover. May 28 plains of Sacramento.
Orthocarpus

Seeds, (Latitude 39°. 12';)
Buttes camp — May 31. 1846

422— a kind of rose colored plum plant abundant throughout the Joaquin and Sacramento valley.
Orthocarpus

423 a blue larkspur; seed bitter.

424 another abundant plant.

425— not abundant

426 T. heterodon a clover, red— abundant.

427— a kind of balsam vine with small, white, star-shaped flowers; melothri(or)ra? I formerly called it Yerba Buena — it is not so. It bears a nut.
Megarrhiza

June 1. Buttes camp, Sacramento valley.

5h. 10' P.M. The flowers of the amóle (No. 439) have just commenced bursting open. The sky perfectly clear, and the sun hot, but tempered by a fresh breeze. Yesterday evening I did not observe it as having commenced until 6h.10! The bud appears to be fresh, opening for the first time, and the petals open out or unfold themselves instantly with a sudden spring. They close in the course of the night: this morning at break of day there were none open. I think that when it closes the flower never again opens, having only an existence for a few hours of the night: It springs into life when other things seek repose, with the setting of the sun — but never lives to see him again.

2 new plants here.

June 2d 8, A.M. Butter Camp.

I visited the amole plants yesterday evening at 9h. and found the flowers already closed.

Plants.

428. A new plant with a purplish flower and having a fragrant perfume. In

rocky ground. Leaves woolly and resembling - malva.

429. A plant found only before with a bluish flower - this is yellow. Abundant here in rocky ground among the hills.

430. Eucharidium coccineum F. & Mey. A new plant with a dark rose colored flower. Grows in rocky ground and has only been seen on the hill slopes.

431. Horachia (Syrmatium) junceum. A leguminous shrub, 4 feet high and bearing a yellow flower - Its first appearance.

432. a purple coloured flower. grows in bare places where there is no grass, amidst gravel and stones. Abundant - (On road from Neal's to the Buttes.)

433. Calochortus luteus. another species of the moss flower - near Peter Lassen's, May 25.

434. a new plant. at Camp on Humming Bird creek, May 23d.

435. Another Lindleyi. a, new and beautiful plant of the tulip kind - on Denny's creek upland, May 22d.

436. color white - this is an abundant plant. May 22d & Pasum - I cannot preserve the flower - becomes yellow and dries up.

(3d sheet)

437 - Plains or flat valley of the Sacramento. May 28. very abundant and grows in fields.

438 - a species of clover, grows in bare places which have been overflowed and whence water has withdrawn. grows in fields.
Pogogyne

439. The amóle plant - numerous here.
Chlorogalum

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440. First found in the Sacramento valley, May 22d Not very abundant. Grows here as abundantly as I have noticed it at any place elsewhere.

441. Sacramento plains, abundant passim - May 28.

442. Some here. a handsome flower. Among and generally under the oaks in the river bottoms at Lassens. grows in small fields or close patches.

443 - a species of clover, - plains between this & Neals. this spot not very abundant.
Trif. variegat. β.

June 2d afternoon. Buttes camp. latitude 39°.12'. I have just noticed a bush of the amóle with two flowers open. It is 4h. 23', P.M. this must be near about the earliest time at which it opens, as the neighboring bushes have none yet open.

444. Cuscuta? at the Buttes, May 31.

445. Chorizanthe membranacea
at Lassans. May 25. Il y en avait pas mal.

446. Du Baume. Bas fond de la rivière. Lassans May 25.
Monardella

447. Ribes cereum an abundant shrub in the volcanic ground near Lake Rett. May 16.

448. Phlox R. an abundant plant and very handsome. Upper Sacramento highlands. This has lost its color.

449. Delphinium A scarlet larkspur — upper Sacramento. has lost its color.

450. Uniola Wild oats; rio chino, May 27, very abundant on Sacramento above Lassan's and abundant here at the Buttes — in feilds as if sown.

451. Another grass, abundant in places.

452. Epinette des prairies (Grindelia o(or s) quarrosa.) very abundant here.

453. =473 Lupinus ~~[illegible]~~ densiflorus a lupine, white: plains of the Sacramento; frequent, solitary, that is not in fields. passim since re-entering the lower Sacramento.

454. Avena Wild oats; Lassan's farm.

455. Last camp but one on upper Sacramento. this has last color of the flower which was blue

456. Color of flower in this spot is yellow. in others blue — Sacramento plains May 27.

457. abundant or rather frequent passim. 10 × at Lassan's farm. Achillea millifolium.

458. a handsomely colored thistle, occasional. Camp 22–23d May.

459. Mountain Birch! Rhubarb tree. ~~Rh~~ Pachyphyllum ramosissimum Between last two camps on Sacramento — very abundant.

Purshia 3-dent.

460. An abundant shrub. same locality and date as 447.

461. Southeast end Klamath Lake.

462. Camp where Basil was killed.

463. May 15, on river of the two lakes an artemisia very abundant on plain near the river - in appearance the bush is altogether like artemisia tridentata.

464 Klamath Lake: abundant in thickets along the rocky eastern shore, two to ten feet high and in full bloom.

465. bears a beautiful spike of white flowers, with which it is covered and it presents a beautiful appearance. Above Lassens, on the stream of the valley and over all the west side of the Sierra up to the great piney region. (horse chesnut.)

466 Forks of Nozah river, 22 May, in foot hills of the mountain

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467 Same locality as 466 - flower entirely lost color - 6-7 feet high

468 - a beautiful shrub, bearing a spike of lilac flowers. forks of Nozah river, Rio chico &c - 4-8 high - very fragrant.

Ceanothus integerrimus = 410.

469. highland on South side of Nozah river 22d May. Allium acuminatum?

470. Noon halt, May 22d. another new shrub, but in grosses talles fortes. Its only appearance - flower an ochre yellow color.

Fremontia Californica

June 4. Buttes Camp.

(Plants of which we have the seeds.)

471 – a blue flower abundant in valley.

472. the white flowering worm-plant – abundant throughout the Sacramento and Joaquin valleys.

473 – a white-flowering legume – abundant par taches.
± 453 Lupinus ~~[illegible]~~ densiflorus

474. A plant which I have generally called the beautiful red – frequent on the heads of the Platte – (Arkansas Divide) and common here.
Castilleja
See Hub. Hor.

Plants.

475. A plant with small white flowers in the little bas-fonds – at the foot of hills here.
Linum Californicum

476. white flowering – sida? same place.

477. a milk plant – asclepias? In flower and in seed. rivulet bottom among the hills at camp.

478. In the coulée here. Tout le terrain est comme ceci dans le camp – des gravois.
Hemizonia n. sp.

479
474 } Abundant in small fields on the plain between this and Duttons (Neal's) May 28.
orthocarpus lithospermoides

480 – Along the river bank at Lassen's – Seeds at the Buttes – May 27.

481 – At Lassen's – a species of tobacco which one of our Indians brought to les jeunes gens to smoke, as they were out of tobacco.